



03CO/

PATENT**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

#5

In re Application of: van Gemen et al.**Serial No.:** 10/006,009**Filed:** December 4, 2001**For:** TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE
THEREWITH**Examiner:** Unknown**Group Art Unit:** 1645**Attorney Docket No.:** 5189US**CERTIFICATE OF MAILING**

I hereby certify that this paper or fee along with any attachments referred to or identified as being attached or enclosed is being deposited with the United States Postal Service as First Class Mail (under 37 C.F.R. § 1.8(a)) on the date of deposit shown below with sufficient postage and in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit

Signature of registered practitioner or other person having reasonable basis to expect mailing to occur on date of deposit shown pursuant to 37 C.F.R. § 1.8(a)(1)(ii)

Typed/printed name of person whose signature is contained above

SUPPLEMENTAL COMMUNICATION

Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed are drawings that more clearly depict the invention.

Respectfully submitted,

Allen C. Turner
Registration No. 33,041
Attorney for Applicants
TRASKBRITT, PC
P. O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: (801) 532-1922

Date: March 18, 2002

ACT/bv

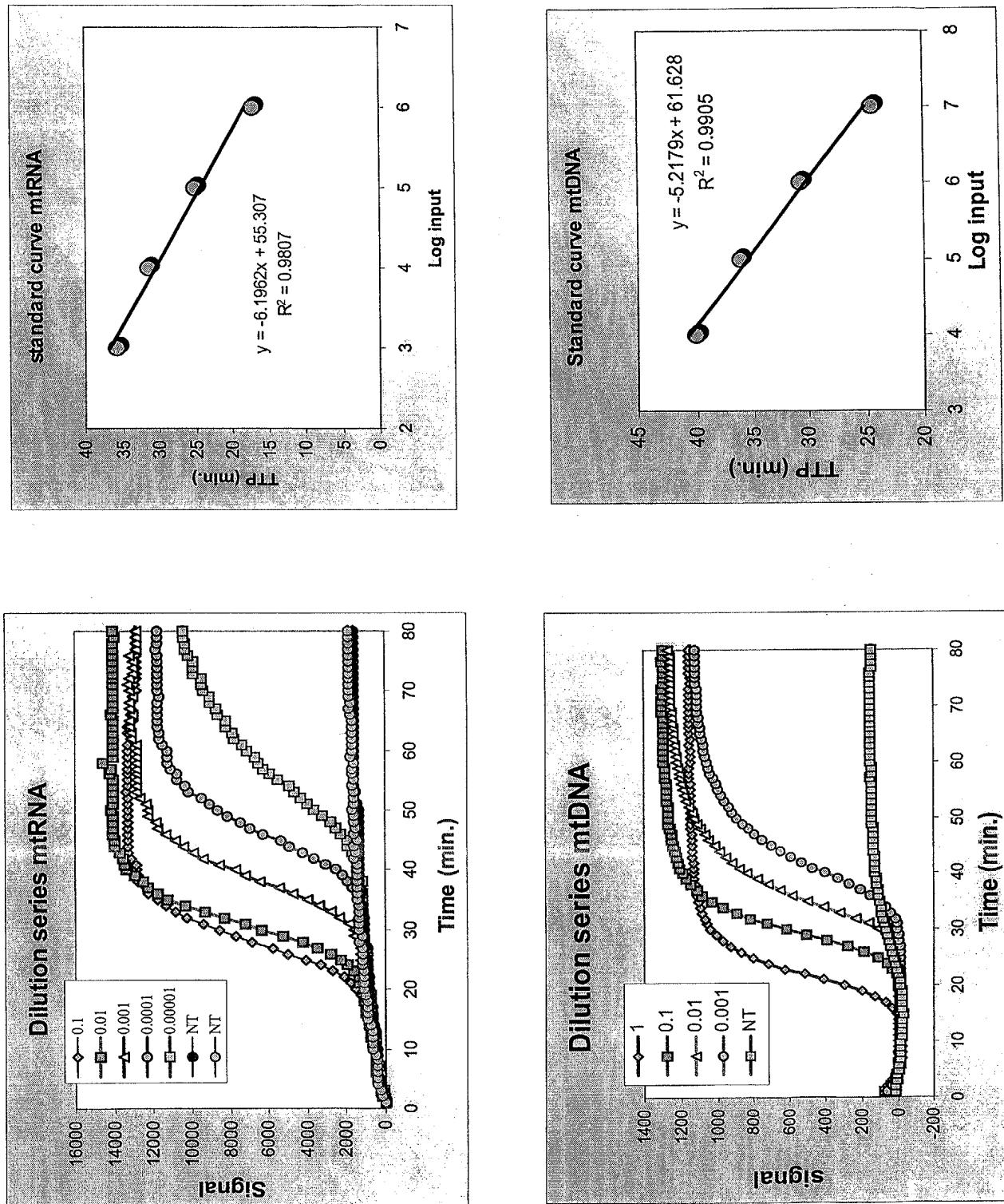


Figure 1

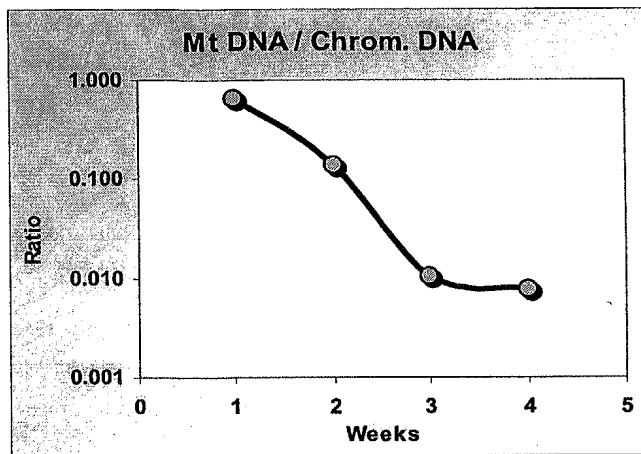


Figure 2

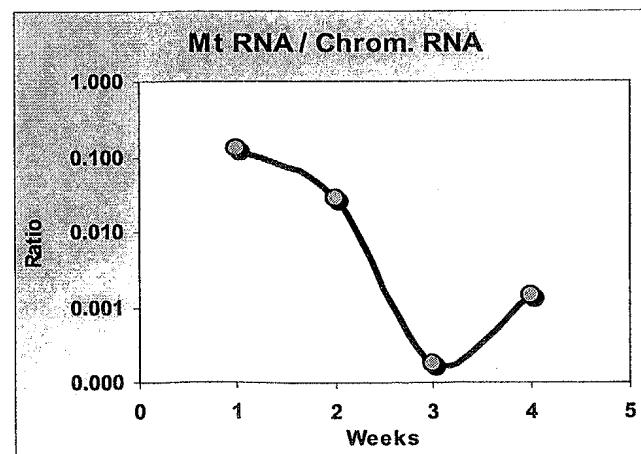


Figure 3

TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US

3/22

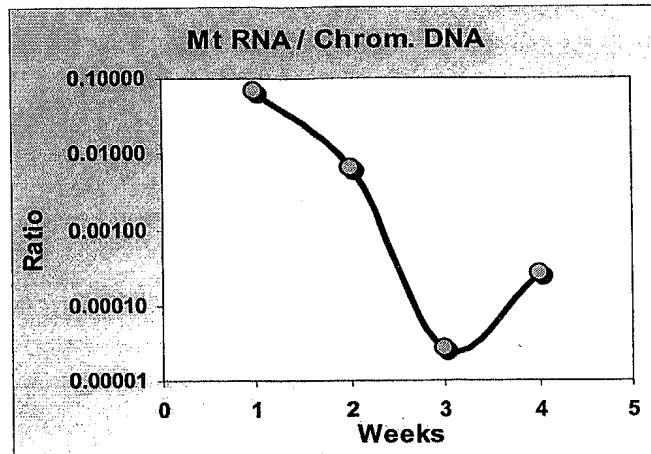


Figure 4

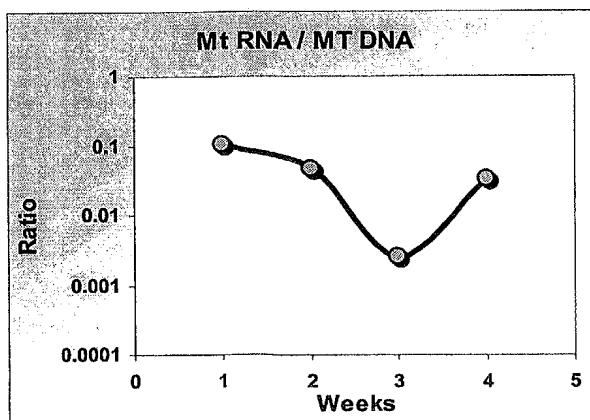


Figure 5

TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US

4/22

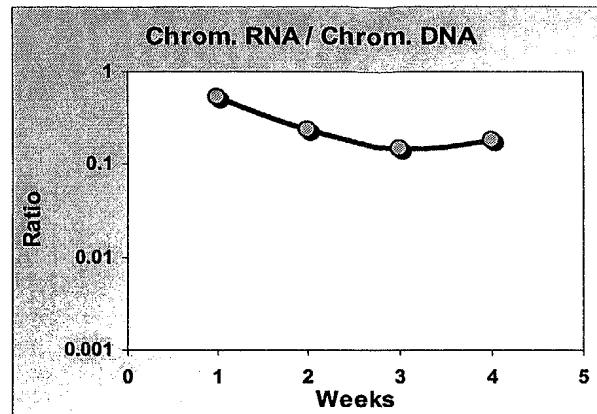


Figure 6

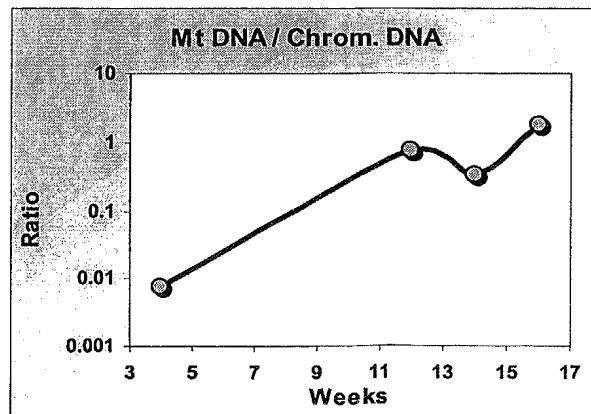


Figure 7

5/22

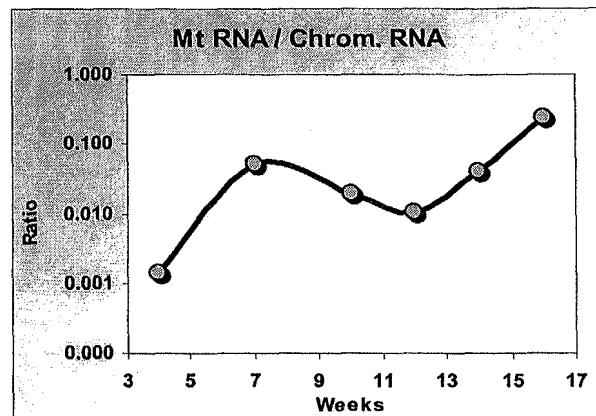


Figure 8

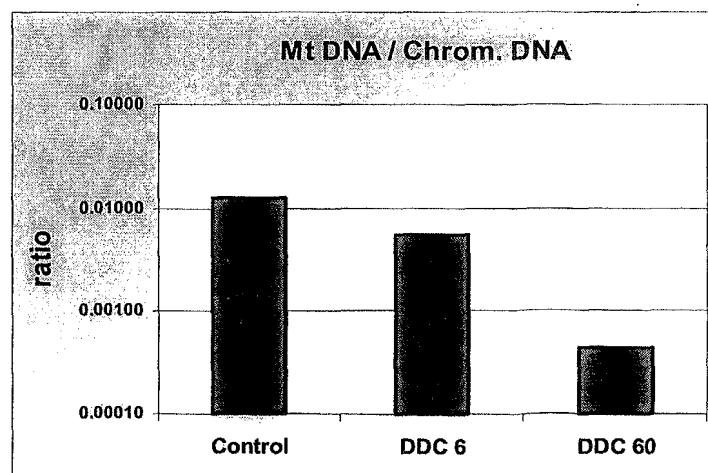


Figure 9

TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US

6/22

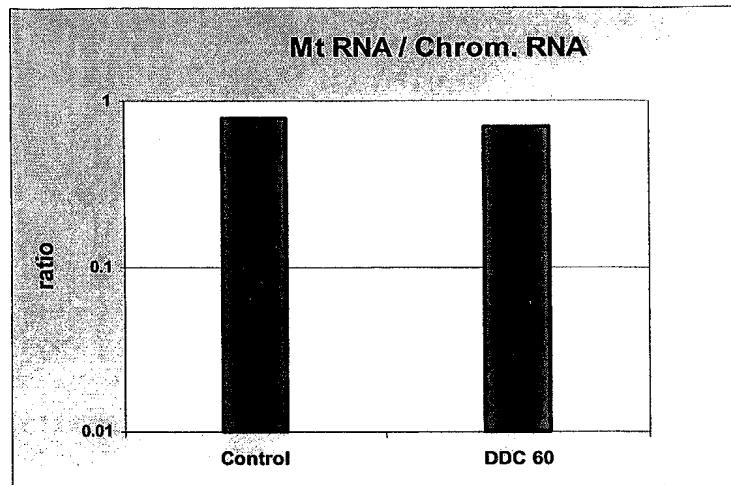


Figure 10

7/22

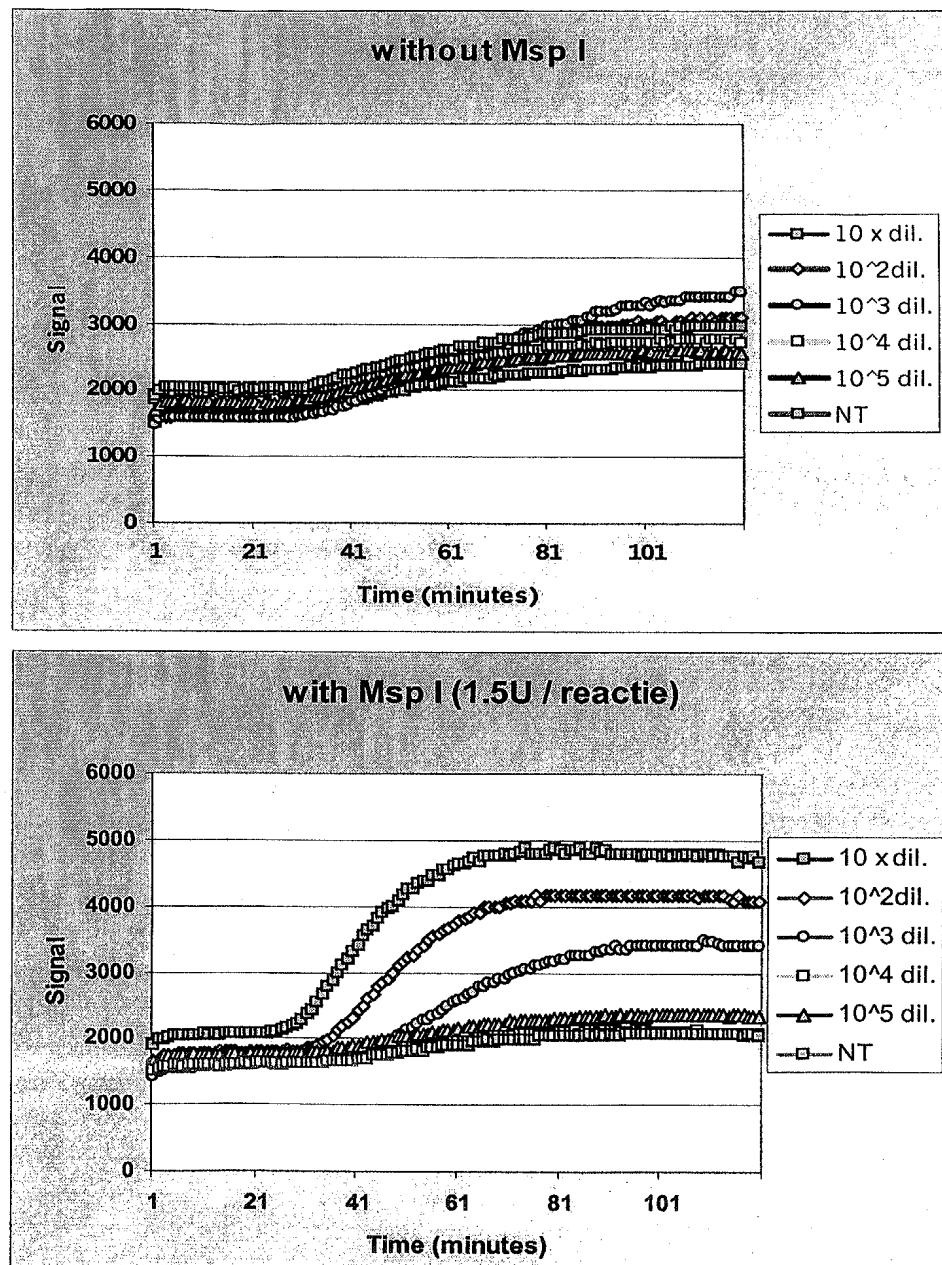


Figure 11.

Fig. 12

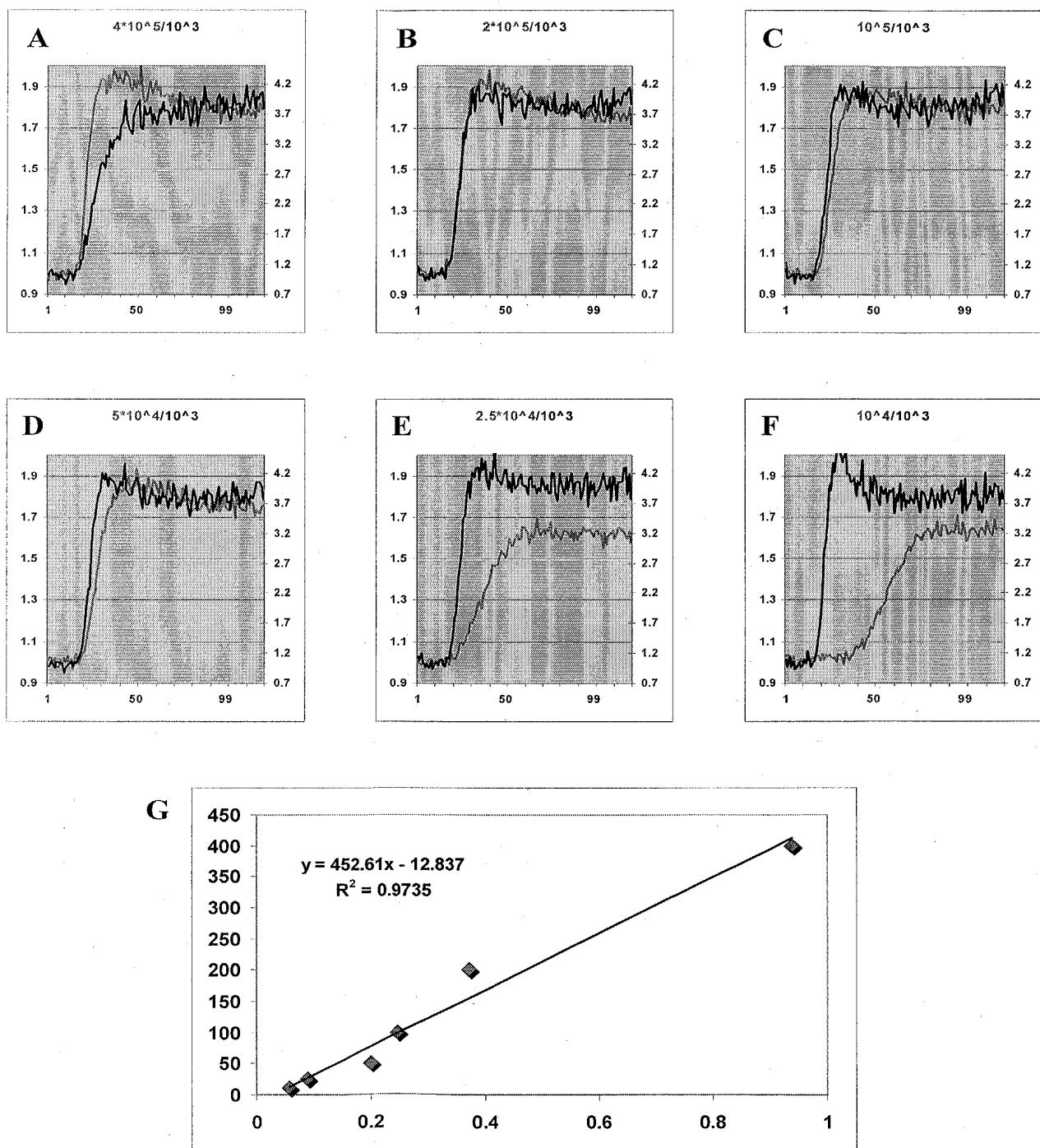
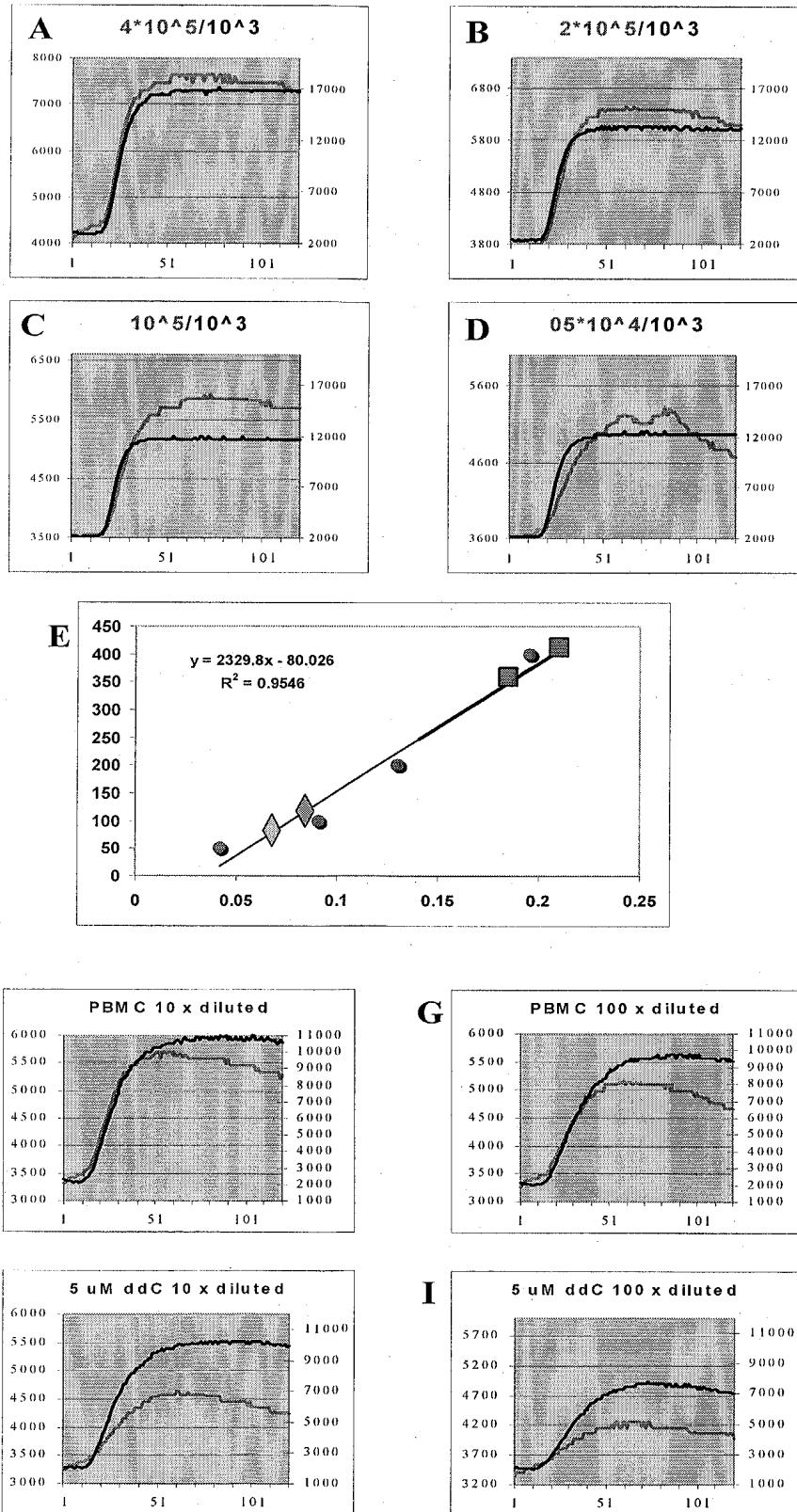


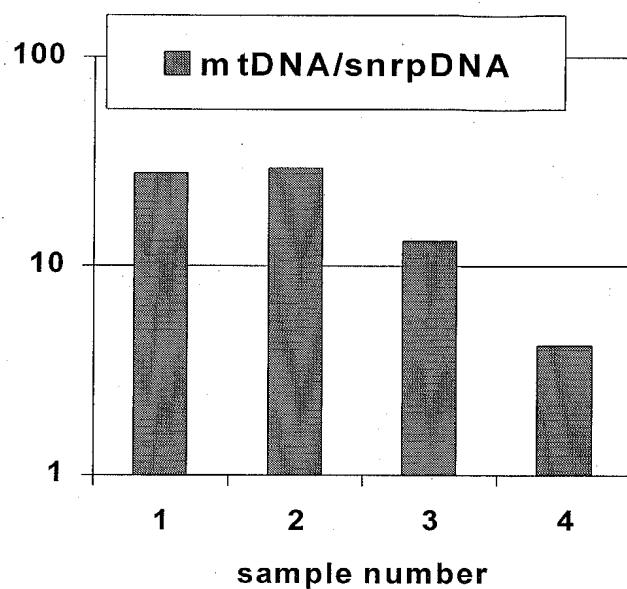
Fig.13



TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US

10/22

Fig. 14



2022000000000000

Lactate acidose patient (H0224)

M10620 (H 0224)

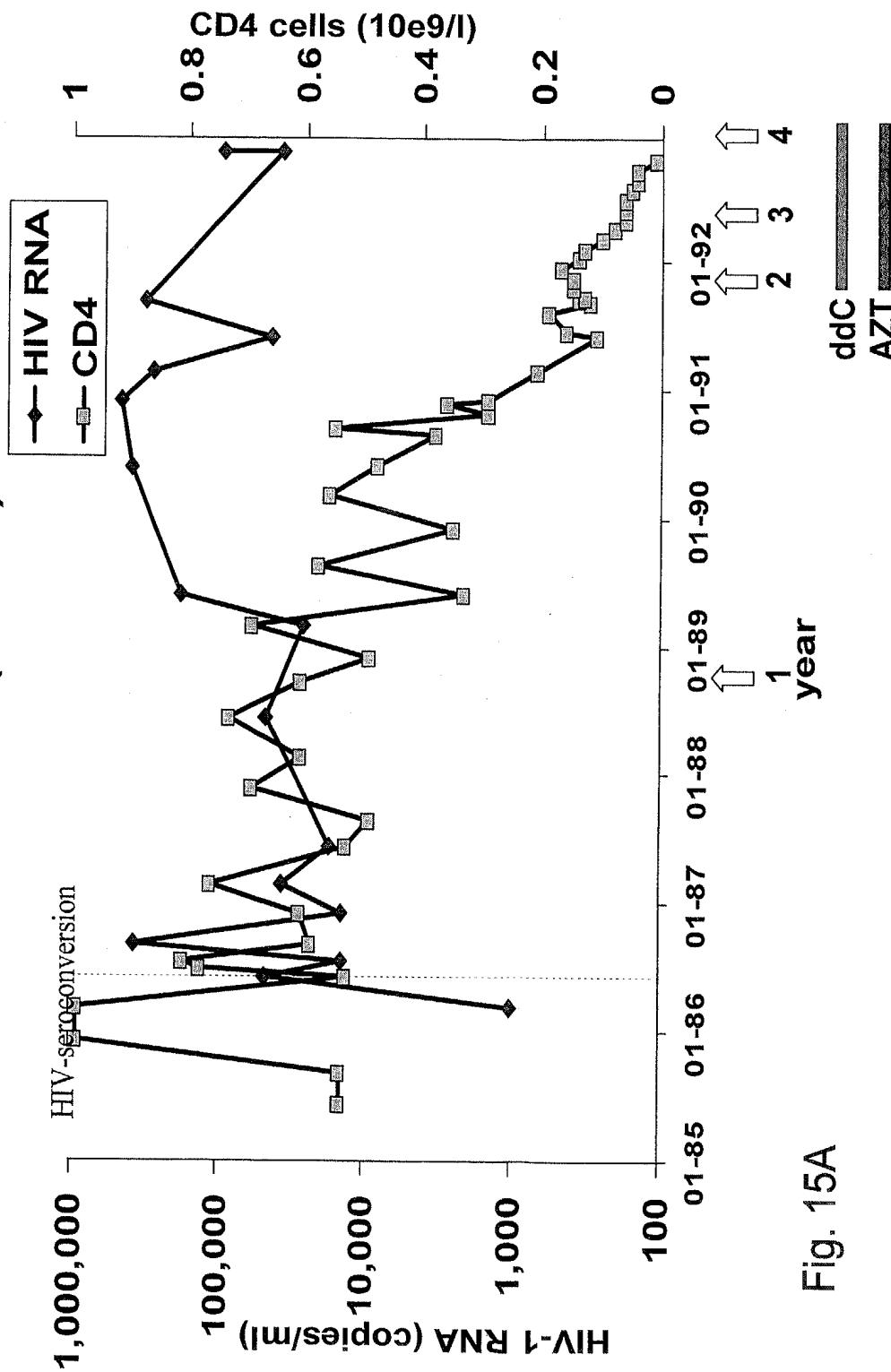


Fig. 15A

Lactate acidose patient (H0224)

TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US
12/22

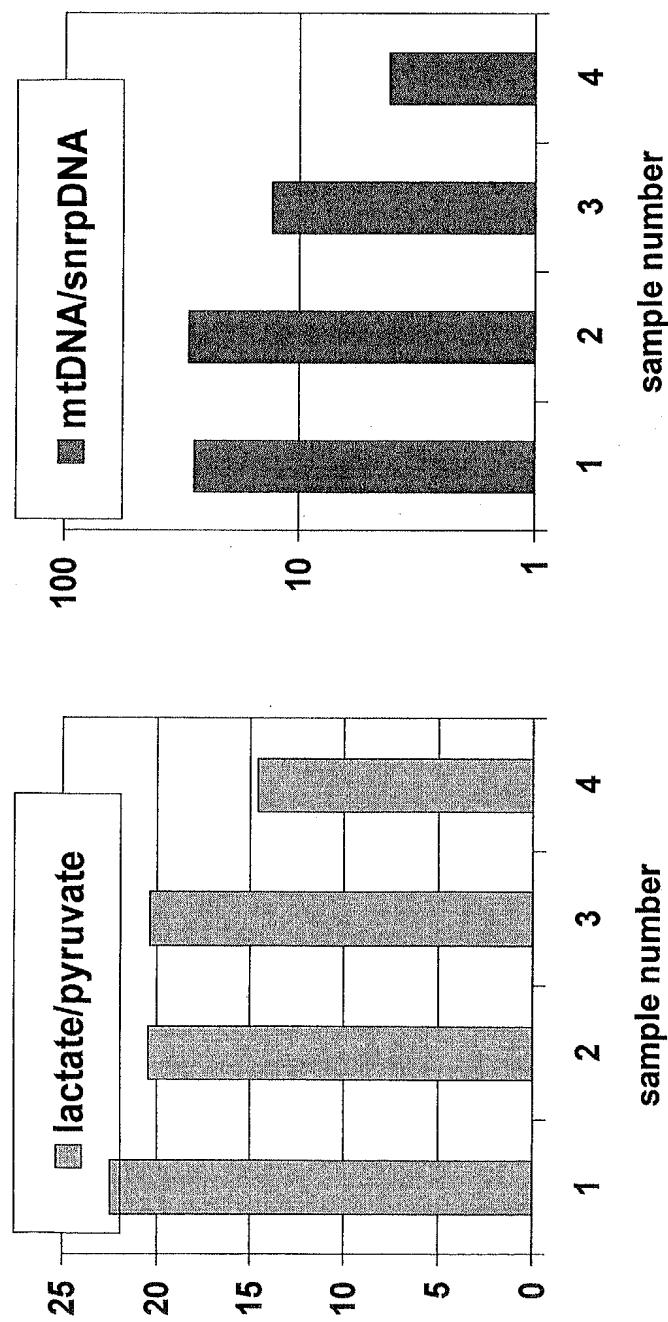
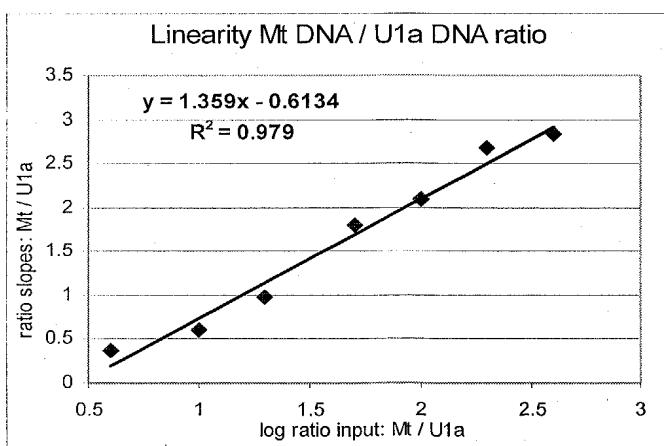
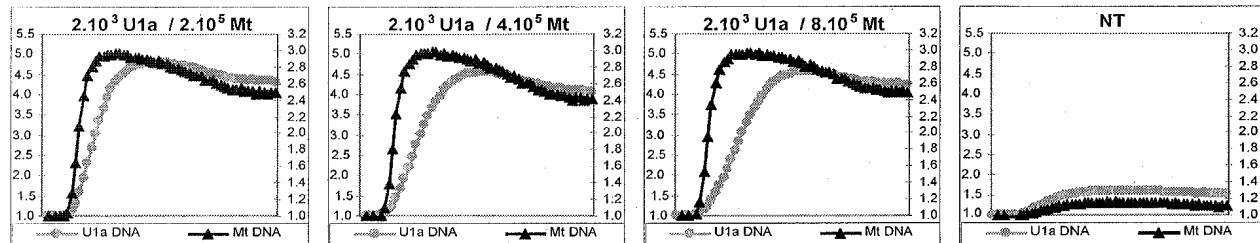
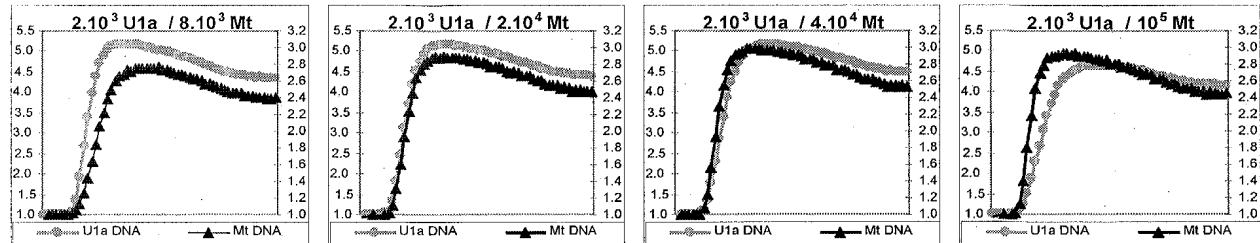


Fig. 15B

13/22

Fig. 16



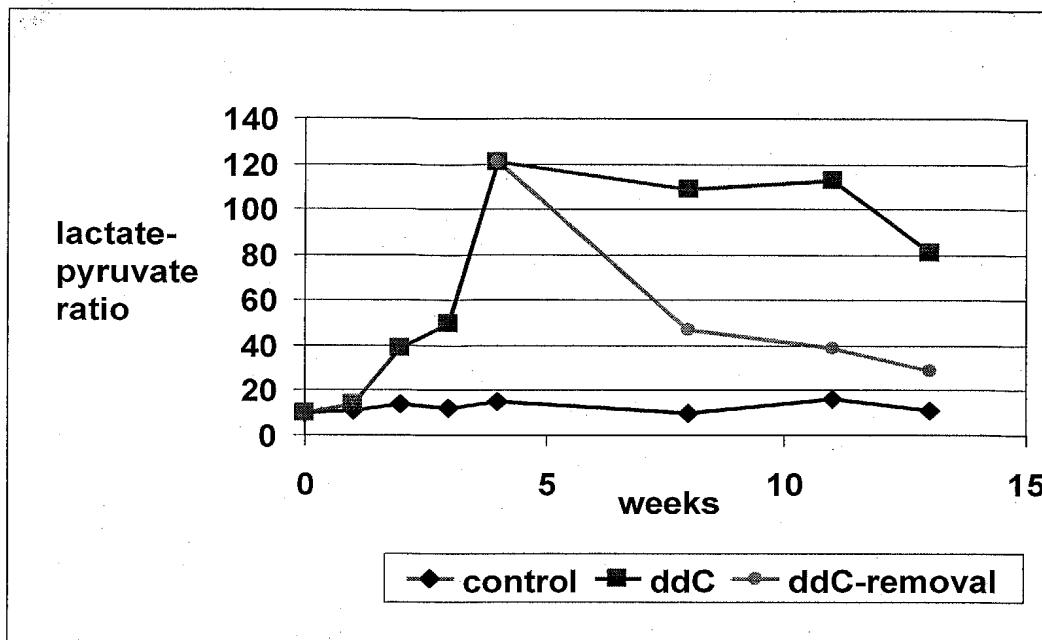


Fig. 17

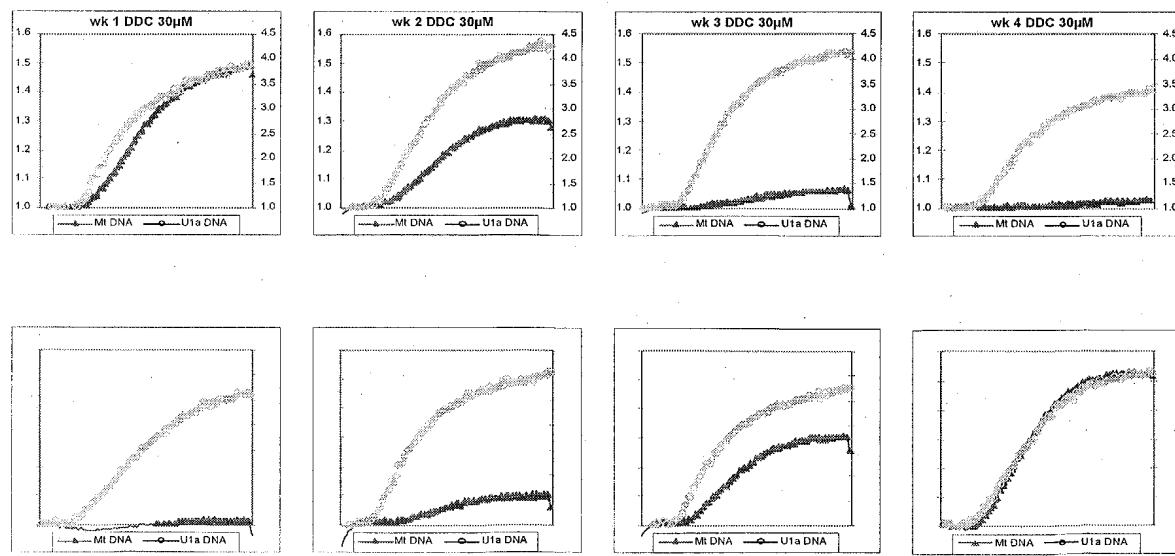


Fig. 18

TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US

15/22

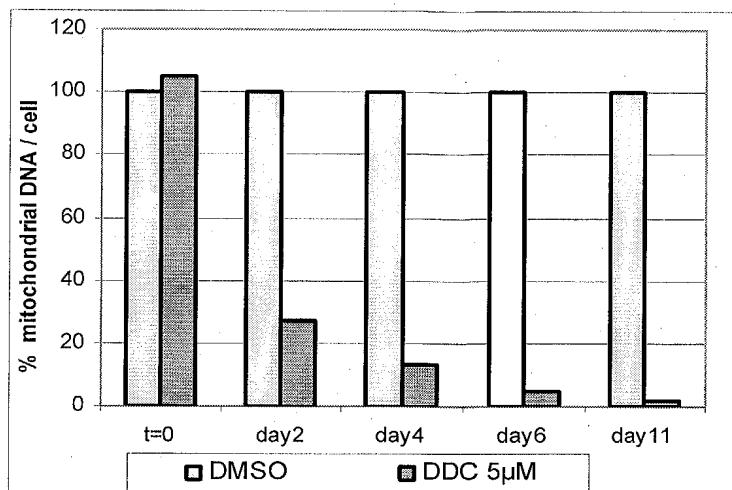
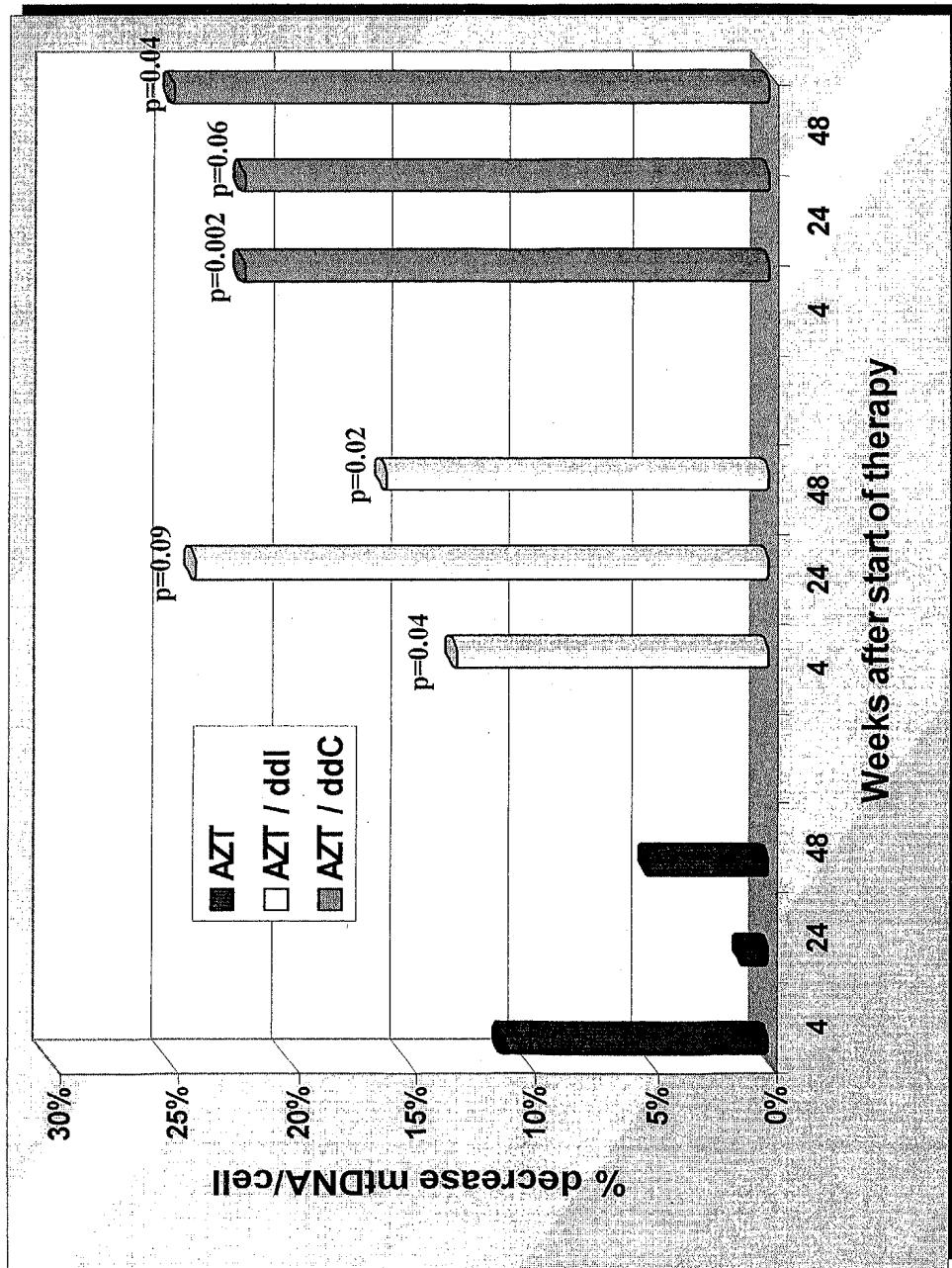


Fig. 19

Fig. 20

Significant decrease of mtDNA in PBMC

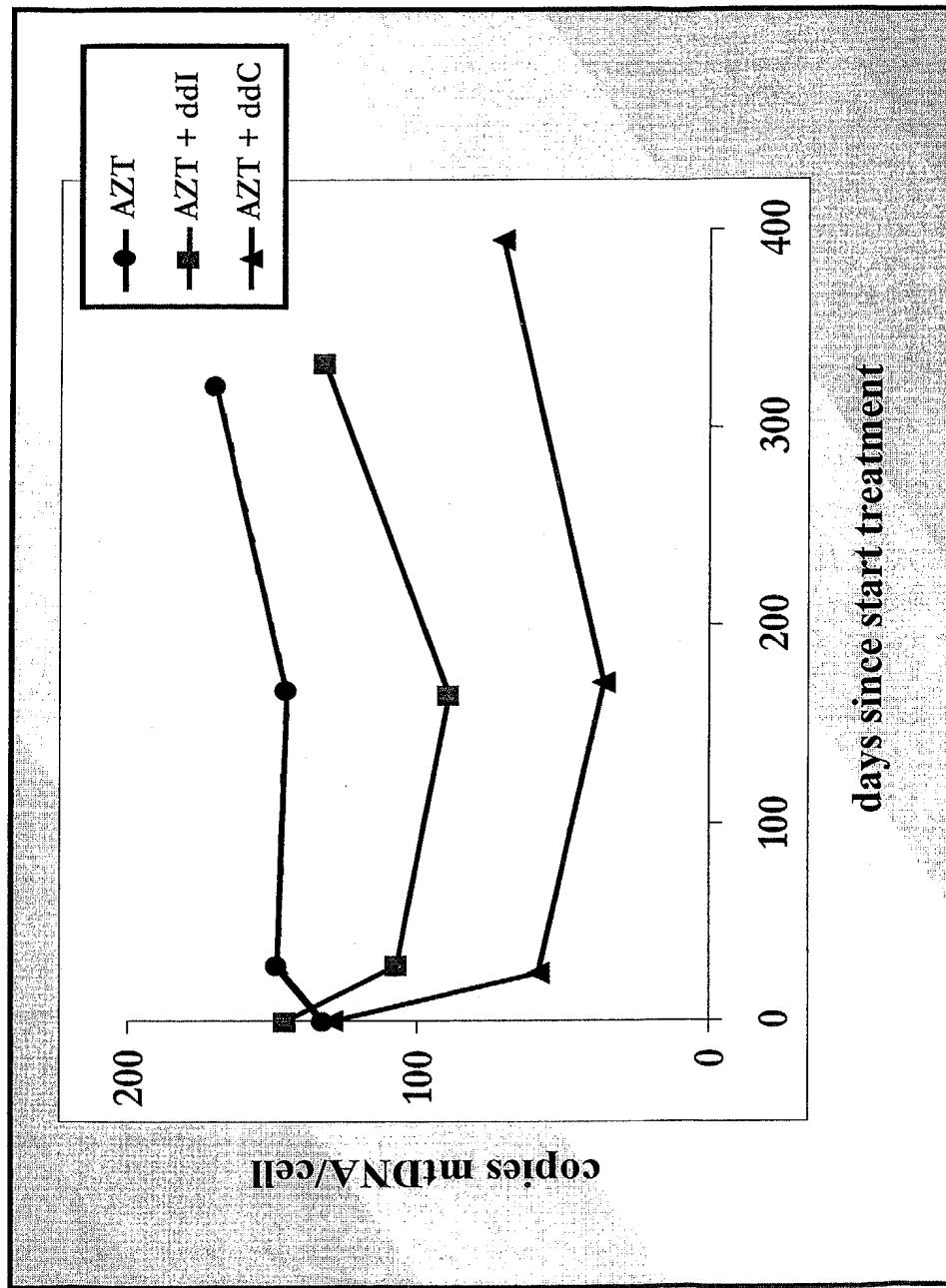


TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US

17/22

Fig. 21

Copies mtDNA/cell for three individual patients



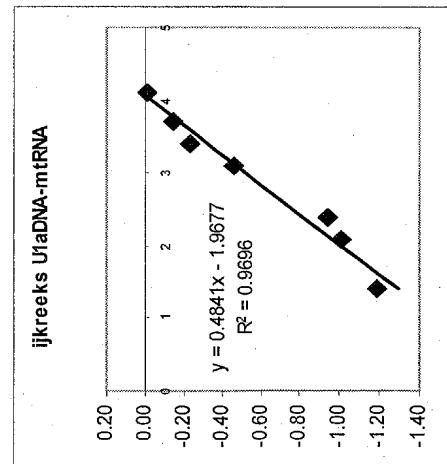
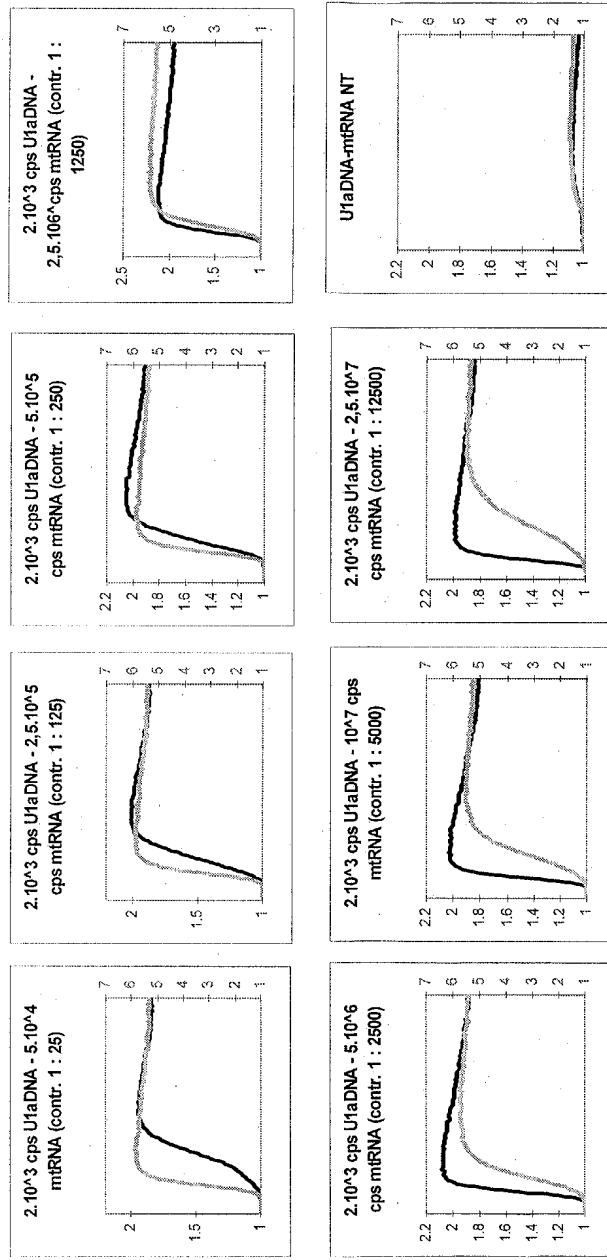
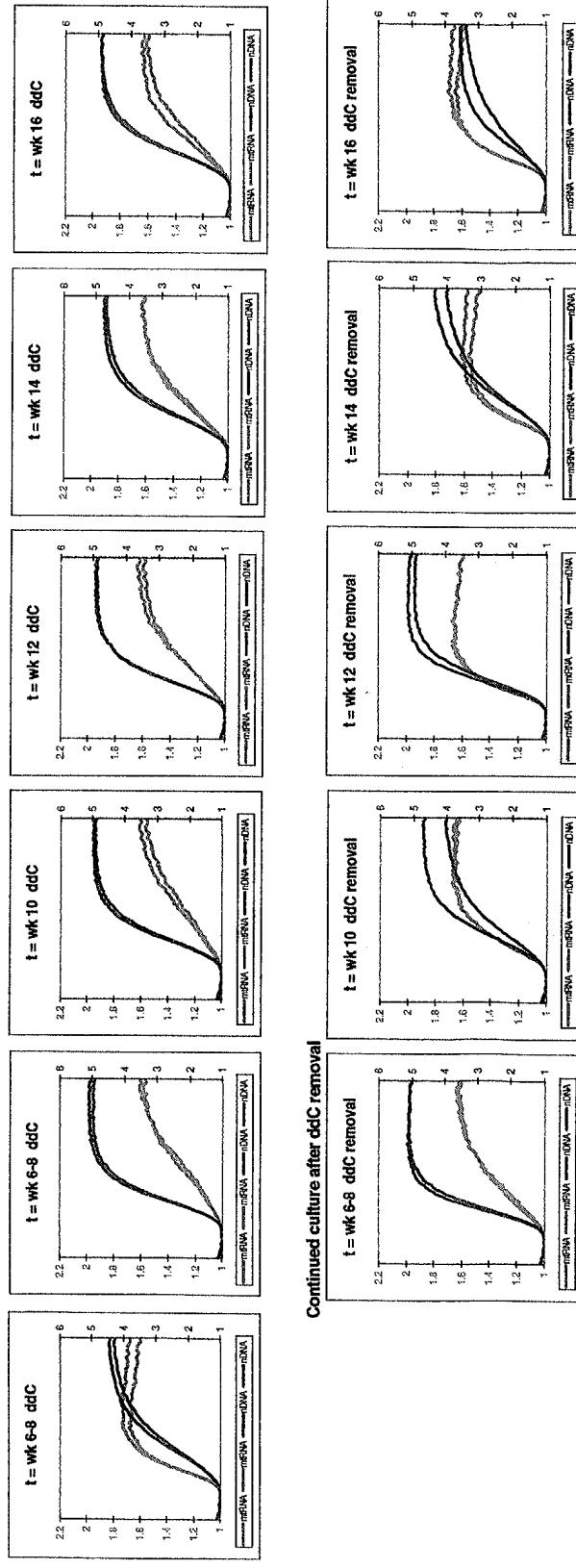


Fig. 22

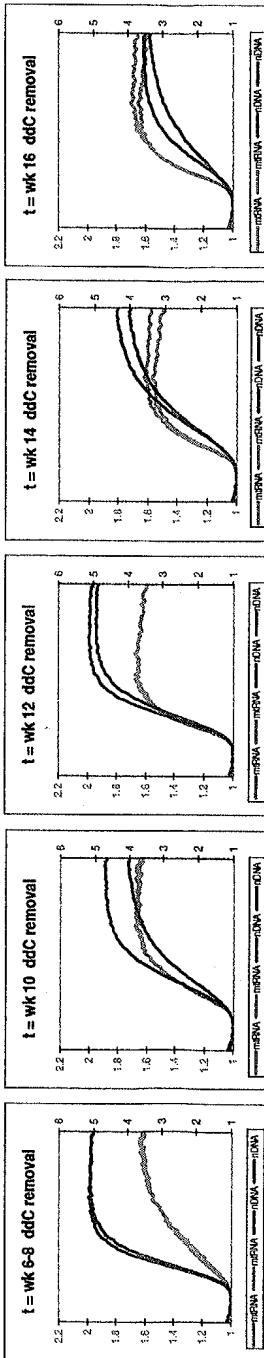
20 18 16 14 12 10 8 6 4 2 0

Cultured fibroblasts with ddC

mttRNA - nDNA duplex



Continued culture after ddC removal



TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US
19/22

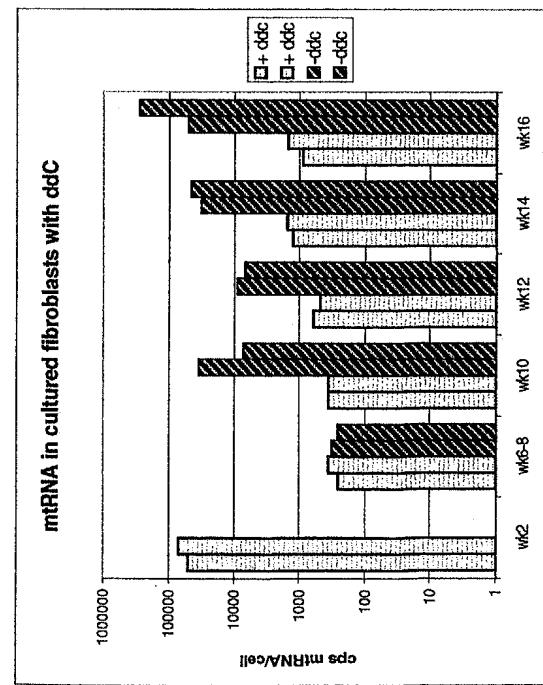


Fig. 23

2027250 " 6003000T

Adverse effects of antiretroviral therapy

Percentage of patients changing ART because of adverse effects
(results from the ATHENA-study in the Netherlands)

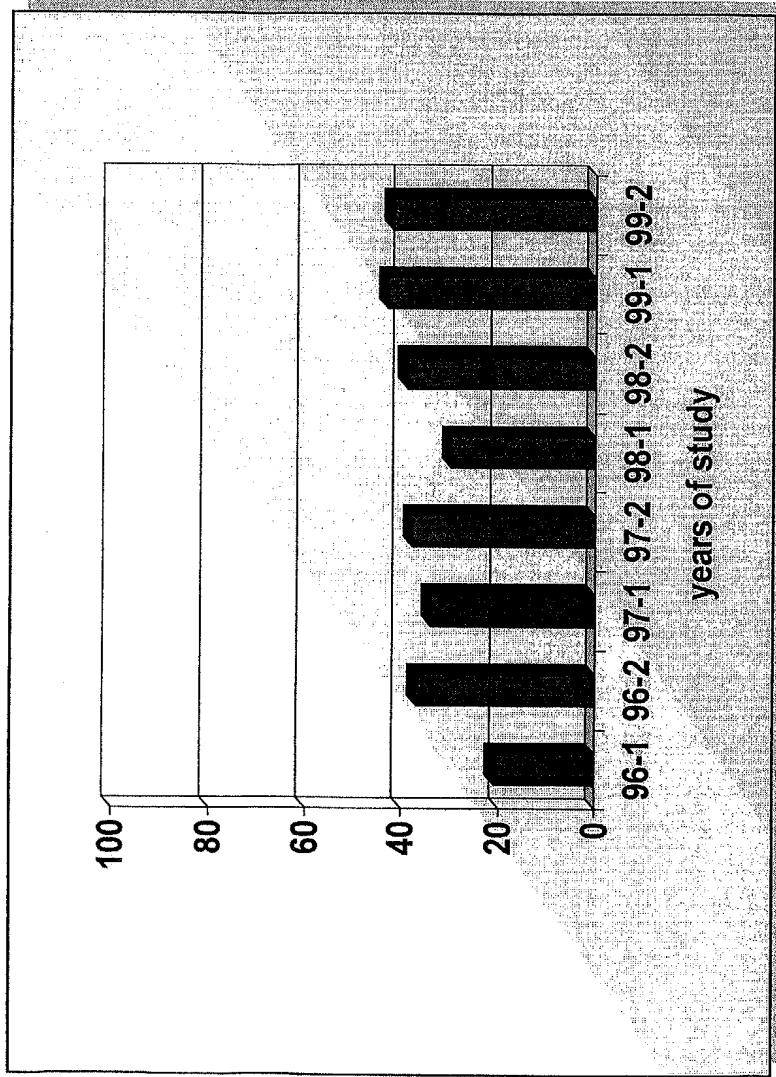


Fig. 24

TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH
Inventor: van Gemen et al.
Serial No.: 10/006,009
Docket No.: 2183-5189US
20/22

DNA-NASBA amplification

SEARCHED 5009000

TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH

Inventor: van Gemen et al.

Serial No.: 10/06,009

Docket No.: 2183-5189US

21/22

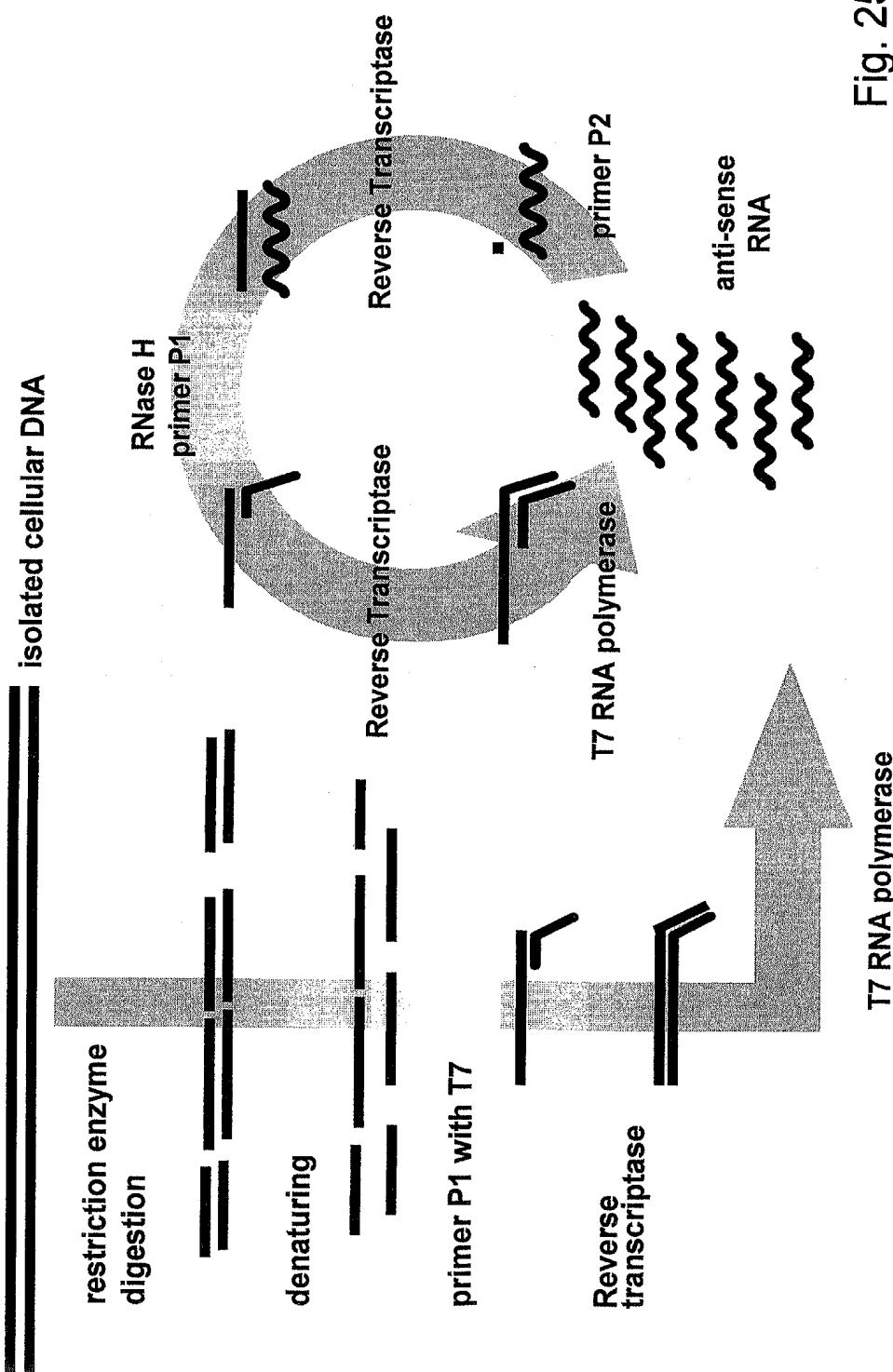
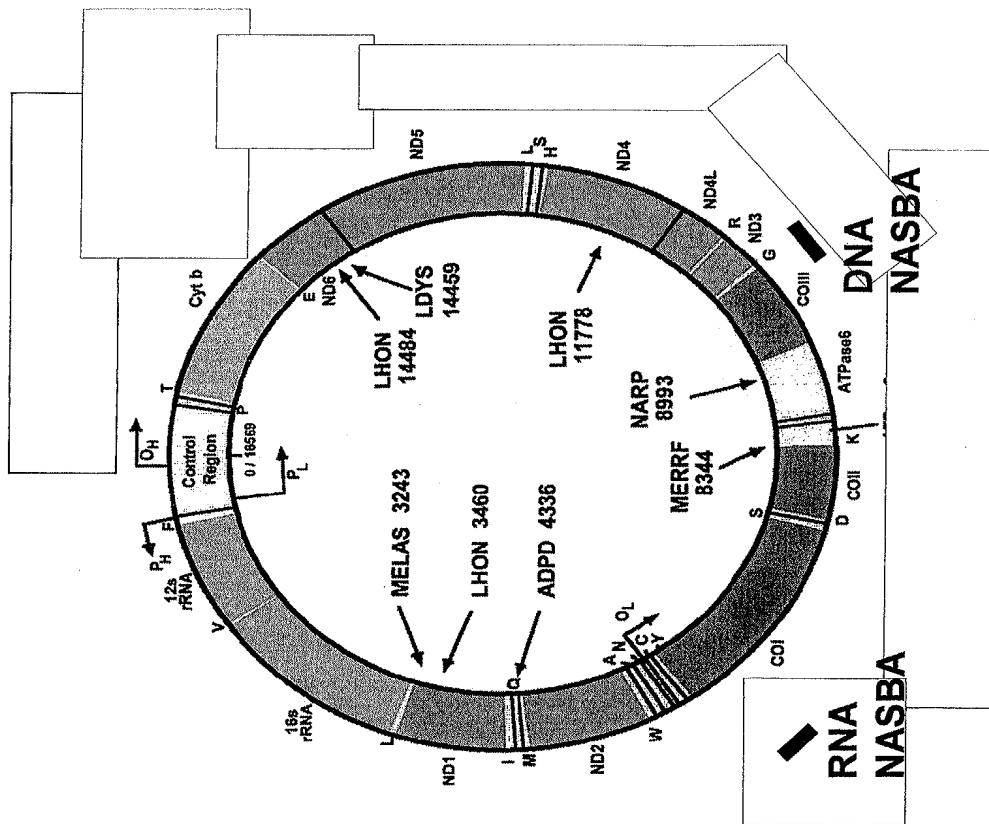


Fig. 25

Mitochondria

location of primers for NASBA



TITLE: TESTING ENDOSYMBIONT
CELLULAR ORGANELLES AND
COMPOUNDS IDENTIFIABLE THEREWITH

Inventor: van Gemen et al.
Serial No.: 10/006,009

22/22

Fig. 26